Erasmus School of Health Policy & Management

EUHEA

SHAPING THE FUTURE: THE ROLE OF HEALTH ECONOMICS

Broadening the evaluative scope of economic evaluations: Why and how

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Content

Broadening the evaluative scope along two lines:

1. Applied perspectives, (assumed) aims, and decision rules

2. Our methods of performing economic evaluations

Background

- Economic evaluations used to inform allocation decisions in health care
- Normally in the form of a cost-utility analysis: incremental costs / QALYs

- Explicit/implicit decision rule: ICER < ‘threshold’
- Variation between countries and studies in methods and perspectives

- Value judgements and ‘status quo bias’
- This variation can considerably impact outcomes (and potentially decisions)

- Expanding use of economic evaluation signals issues with current scope
- Hence, explicit attention and deliberation required

Economic evaluation and welfare economics

- Central objective in welfare economics is to provide an ethical framework for making meaningful statements about whether changes improve welfare.
- As Boadway & Bruce (1984) state: '*That is, the welfare economist wishes to determine the desirability of a particular policy – not in terms of his or her own values, but in terms of some explicitly stated ethical criteria*'

- In some ways, the art of applied economic evaluation in health care may have developed faster than the debate on the underlying ethical criteria
- Different 'ethical frameworks', incl. re goals to pursue, what welfare entails, and the role of equity considerations, seem to underlie methodological choices
- Direct discussions on ethical framework and underlying value judgements important

Perspective: health care

- In some countries, a narrow health care perspective is taken
- Assumes fixed HC budget and a decision maker who wishes to maximise health:

  (1) $[\Delta Q - \Delta c_h/k] > 0$ OR $\Delta c_h/\Delta Q < k$

Where ΔQ is gained health (QALYs), c_h incremental costs in health care sector and k CE of displaced activity

RULE: cost-effectiveness of new intervention should be better than current (displaced) care

- Assumption: decision maker only considers costs falling on budget and health
- Broader costs and benefits are deemed irrelevant (even if as externalities)
- Equity concerns could e.g. be included by multiplying ΔQ_i by factor α_i
- Budget is set in some exogenous way and taken as a given
- Health-health trade-off more acceptable?

Five remarks

1. Humble? Yes! But ‘even’ dentists have an opinion about *how to* repair teeth! We serve *and* we shape!

2. Equating a HC perspective with extra-welfarism is incorrect (Brouwer et al., JHE 2008) and not a justification for ignoring real welfare effects
3. Disconnect between setting the budget and spending the budget. Exogenous budget would be expected to be determined by broader effects

4. Ignorance about broader effects (even those with distributional consequences) is rarely a solution (to distributional issues)
5. If scope differs per sector/financing source, same intervention could be judged differently depending on where financed…

Societal perspective

"NOT EVERYTHING THAT COUNTS CAN BE COUNTED. AND NOT EVERYTHING THAT CAN BE COUNTED COUNTS."
-ALBERT EINSTEIN

- Economic evaluation applied welfare economics
- Classical decision rule to optimize *welfare*: *all* benefits of intervention should exceed *all* costs:

  (2) $v_i \Delta Q_i - \Delta c_t > 0$ OR $\Delta c_T / \Delta Q_i < v_i$

Where v_i is consumption value per unit effect (e.g. QALYs), ΔQ_i is incremental units (e.g. QALYs) gained, (subscript *i* allows different values for QALY equity classes), c_t total incremental costs (within and outside HC)

RULE: do not sacrifice more for a QALY than its (social) value

- Leaving out aspects of value impossible without risking non-optimal (i.e. welfare lowering) decisions
- Inclusion of all relevant costs and benefits hence required, inside and outside HC sector and QALY…
- No earthly decision makers may take such a broad viewpoint
- Sound and fair decision making process cannot be replaced by numbers.

Broad perspective with fixed budget

- *If* believed that health care budgets are fixed *and* non-optimal so that v ≠ k, opportunity costs in health care sector become relevant also in societal perspective: $v_i[\Delta Q_i - \Delta ch/k] - \Delta cc > 0$

Where ch + cc = ct

EQ(1)

- **RULE**: Value of net heath gain should outweigh (net) consumption costs

- **<u>Allows pragmatic and 'didactic' solution: two perspectives</u>** (Brouwer et al., 2006; US Panel, 2017)
- Explicitly address those interventions for which two perspectives give different recommendations
- Some issues empirical (v=k?) and some normative (what should decision rule be?)
- Increases comparability

Broadening the scope in practice

- A framework for performing economic evaluation that systematically ignores real costs (e.g. PC) and effects (e.g. in caregivers) seems indefensible
- Broad scope to ensure inclusion of all relevant costs, benefits and considerations
- Requires identification, measurement and valuation of all relevant aspects
- Also those countries and evaluations claiming to do so, often do not

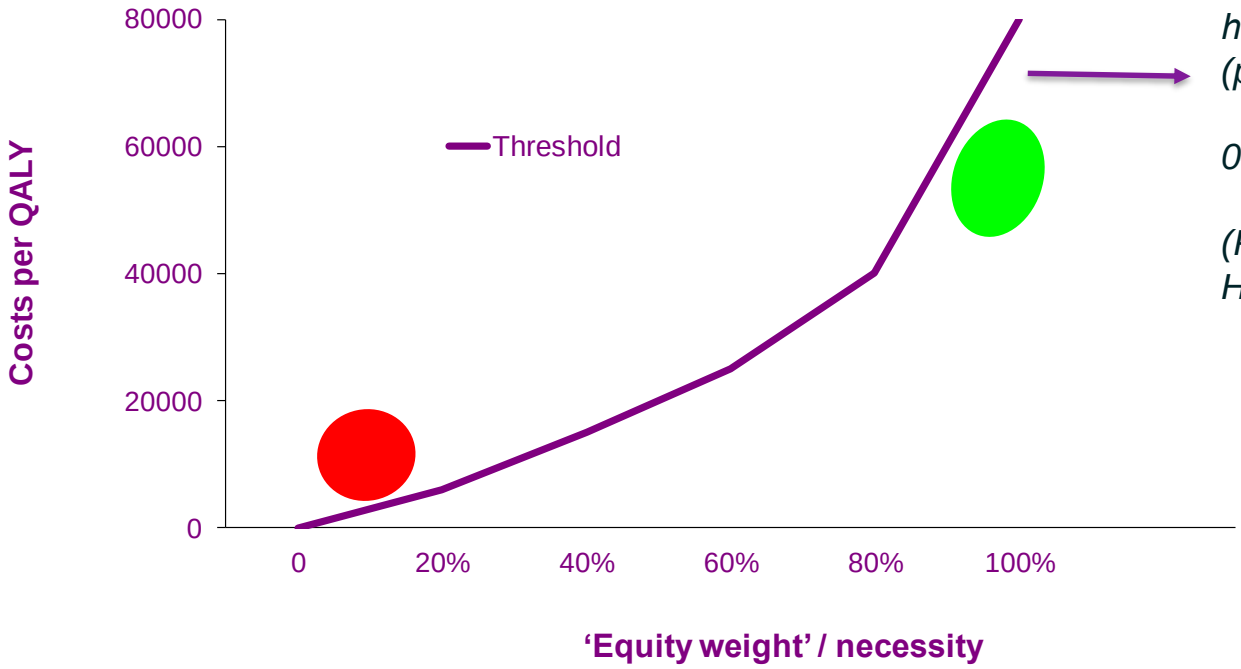
- Hence, we need to improve methods economic evaluations and our practice
- Work needed on measurement and valuation of all elements: Q, ch, cc, v, k, subscript *i*

Right hand side!

- Right hand sides of equation (1) and (2), i.e. v and k, long received little attention
- Estimates of ICER improved and became increasingly complex
- Finding v and k necessary to know when an intervention is too expensive!
- Most used thresholds had/have very limited empirical support
- Research is increasing – but what are we exactly looking for?

- Value k: do we know what gets displaced? How to deal with equity concerns?
- What do discrepancies between v and k mean/imply?
- Value v: individual valuations of own health? Social value which could reflect equity concerns? How to find them and…
- which equity concerns? (i.e., subscript i) Socio-economic status, health or wellbeing status, fair innings, prospective health, **responsibility/culpability?**, …

Context dependent value – which context?

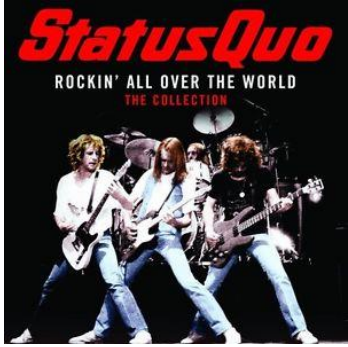


Upward sloping vi – higher for more 'severe' (prop. shortfall) diseases

0–80K€ in Netherlands

(Reckers-Droog et al., HP, 2018)

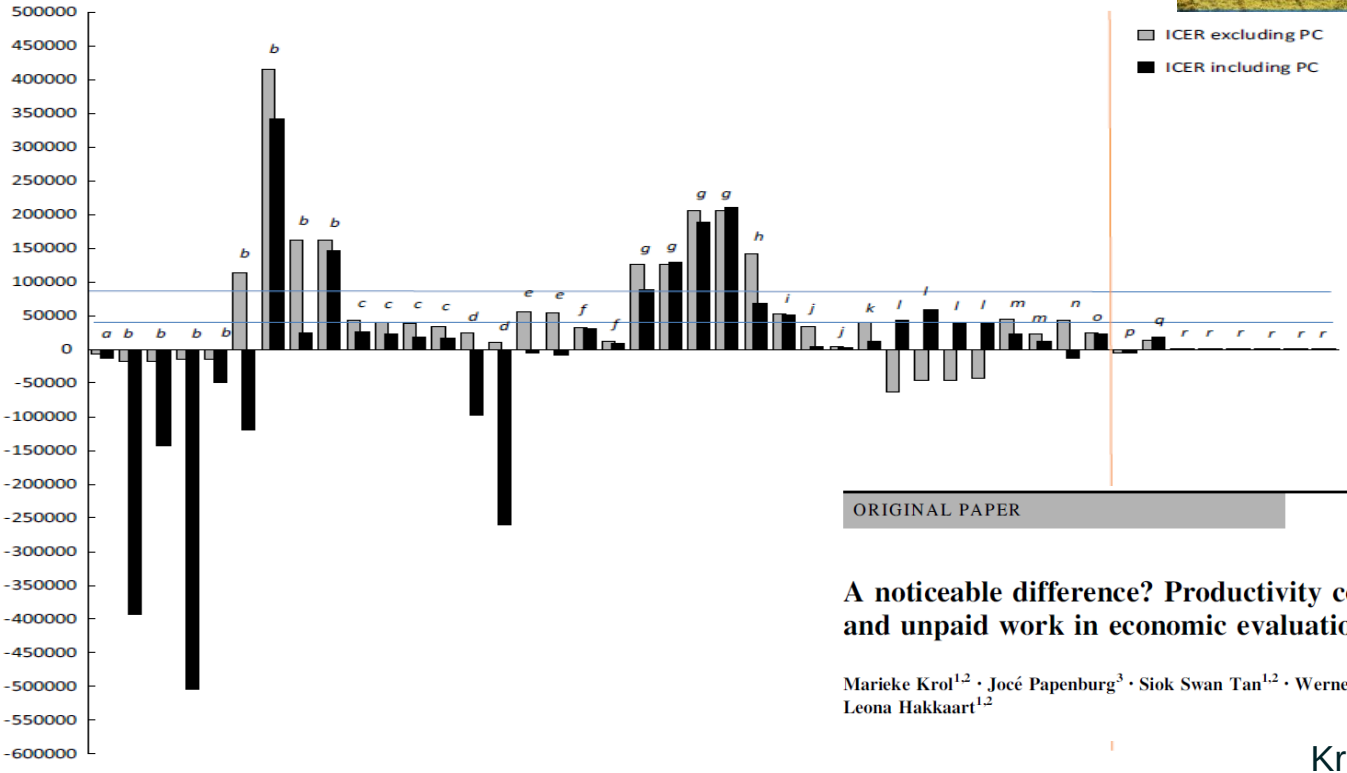
Costs (c_h and c_c)



- Unrelated medical costs in gained life years **excluded** in most countries: wrong and inconsistent
- Relevant from societal and health care perspective (e.g. Van Baal et al., HE, 2016 & BMJ, 2017)
- Time to change guidelines and include these costs!
- Example of 'status quo bias'?

- Broader costs, e.g. productivity costs – much variation in inclusion and methods
- Not only in terms of human capital or friction costs method but also underlying methods
- Inclusion of presenteeism and unpaid work even less common, also in EE taking SP
- Costs of informal care important and also often ignored
- Broadening scope (cc and ch) can have distributional consequences – deal with those explicitly!

It makes a difference!



ORIGINAL PAPER

A noticeable difference? Productivity costs related to paid and unpaid work in economic evaluations on expensive drugs

Marieke Krol[1,2] · Jocé Papenburg[3] · Siok Swan Tan[1,2] · Werner Brouwer[1,2] · Leona Hakkaart[1,2]

Krol et al., EJHE 2016

Effects: relevant benefits & beneficiaries

- Patients are not isolated individuals - their health and treatments affect significant others
- Two distinct effects: family effect (caring about) and caregiving effect (caring for)
- Substantial impact on health and well-being (e.g. Bobinac et al., JHE 2010; MDM 2011)
- Meningitis: saving 1 QALY in patient may result in total ~1.5 QALY gain (Al Janabi et al., HE 2016)
- Health effects relevant from both societal and health care perspective – if displacement then 'net effects' (Al Janabi et al. MDM 2016)

- QALY complete outcome measure? Broadening evaluative scope to include these benefits inevitable
- Many interventions improve well-being beyond health (e.g. palliative care, social care, mental health)
- Not *whether* we need broader outcome measures (ICECAP, ASCOT, WOOP), just *when*…
- Choice of instrument, choices underlying instruments, value sets, important as well
- Should reflect what people consider important for their wellbeing

Let’s broaden that scope!

- To contribute to welfare increasing decisions, scope needs to be broadened
- Narrower perspectives, systematically ignoring elements of value, difficult to defend
- Broadening the scope requires old and new challenges to be met: determining v, k, sound costing methodology, relevant outcome(measure)s, equity considerations, etc.
- Requires quantitative and qualitative research!
- Instruments, methods and estimates are becoming available on many aspects
- Analysis and decision making not easier with two perspectives and broader outcomes: e.g. different instruments in different contexts (move to broader measure as standard?), what is the ‘threshold’ for the ICECAP/ASCOT/…, different equity concerns?

- Choices in health care are not easy…
- But for now: let’s make EE broad again!
- Let’s shape that future…